

WHAT IS CLAIMED IS:

- 1           1.       A method for allocating resources, comprising:  
2           allocating reserved resources to one or more depth levels, wherein the reserved  
3 resources form one or more reserved pools;  
4           upon receiving a request for allocation of resources, determining a depth level  
5 from which to allocate resources; and  
6           allocating a reserved pool from the determined depth level.
  
- 1           2.       The method of claim 1, further comprising:  
2           generating control structures that indicate which resources are allocated to which  
3 processes.
  
- 1           3.       The method of claim 1, wherein the allocations occur at a first cluster and  
2 further comprising:  
3           at the first cluster, waiting for a second cluster to finish initialization processing  
4 before allowing requests for resources to be processed at the first cluster.
  
- 1           4.       The method of claim 1, further comprising:  
2           when the allocation of the reserved pool is unsuccessful, attempting to allocate  
3 resources from an unreserved pool.
  
- 1           5.       The method of claim 4, further comprising:  
2           when the allocation from the unreserved pool is unsuccessful, placing the request  
3 in a data structure to wait for a reserved pool.
  
- 1           6.       The method of claim 1, wherein the resources are task control blocks.
  
- 1           7.       The method of claim 1, further comprising:

2           determining that a reserved pool at   the determined depth level has been  
3 allocated; and  
4           allocating a resource from the reserved pool.

1           8.     The method of claim 7, wherein when the request is a remote request, the  
2 determined depth level is a next depth level.

1           9.     The method of claim 7, wherein when the request is a local request, the  
2 depth level is a current depth level.

1           10.    The method of claim 7, further comprising:  
2           determining that processing with the resource is complete; and  
3           returning the resource to a pool of resources.

1           11.    The method of claim 10, further comprising:  
2           when the resource is returned to a reserved pool, determining whether all  
3 resources have been returned to that reserved pool;  
4           when all resources have been returned, freeing the reserved pool for allocation to  
5 another process; and  
6           allocating the freed reserved pool to a request waiting for allocation of a reserved  
7 pool.

1           12.    The method of claim 10, further comprising:  
2           when the resource is returned to an unreserved pool, allocating the freed  
3 unreserved pool to a request waiting for allocation of a reserved pool at a current depth  
4 level.

1           13.    An article of manufacture    including program logic for allocating  
2 resources, wherein the program logic is capable of causing operations to be performed,  
3 the operations comprising:  
4           allocating reserved resources to one or more depth levels, wherein the reserved  
5 resources form one or more reserved pools;  
6           upon receiving a request for allocation of resources, determining a depth level  
7 from which to allocate resources; and  
8           allocating a reserved pool from the determined depth level.

1           14.    The article of manufacture of claim 13, wherein the operations further  
2 comprise:  
3           generating control structures that indicate which resources are allocated to which  
4 processes.

1           15.    The article of manufacture of claim 13, wherein the allocations occur at a  
2 first cluster and wherein the operations further comprise:  
3           at the first cluster, waiting for a second cluster to finish initialization processing  
4 before allowing requests for resources to be processed at the first cluster.

1           16.    The article of manufacture of claim 13, wherein the operations further  
2 comprise:  
3           when the allocation of the reserved pool is unsuccessful, attempting to allocate  
4 resources from an unreserved pool.

1           17.    The article of manufacture of claim 16, wherein the operations further  
2 comprise:  
3           when the allocation from the unreserved pool is unsuccessful, placing the request  
4 in a data structure to wait for a reserved pool.

1           18.     The article of manufacture of claim 13, wherein the resources are task  
2 control blocks.

1           19.     The article of manufacture of claim 13, wherein the operations further  
2 comprise:  
3           determining that a reserved pool at the determined depth level has been allocated;  
4 and  
5           allocating a resource from the allocated reserved pool.

1           20.     The article of manufacture of claim 19, wherein when the request is a  
2 remote request, the determined depth level is a next depth level.

1           21.     The article of manufacture of claim 19, wherein when the request is a local  
2 request, the determined depth level is a current depth level.

1           22.     The article of manufacture of claim 19, wherein the operations further  
2 comprise:  
3           determining that processing with the resource is complete; and  
4           returning the resource to a pool of resources.

1           23.     The article of manufacture of claim 22, wherein the operations further  
2 comprise:  
3           when the resource is returned to a reserved pool, determining whether all  
4 resources have been returned to that reserved pool;  
5           when all resources have been returned, freeing the reserved pool for allocation to  
6 another process; and  
7           allocating the freed reserved pool to a request waiting for allocation of a reserved  
8 pool.

1           24.    The article of manufacture of claim 22, wherein the operations further  
2   comprise:  
3           when the resource is returned to an unreserved pool, allocating the freed  
4   unreserved pool to a request waiting for allocation of a reserved pool at a current depth  
5   level.

1           25.    A system including circuitry for allocating resources, wherein the circuitry  
2   is capable of causing operations to be performed, the operations comprising:  
3           allocating reserved resources to one or more depth levels, wherein the reserved  
4   resources form one or more reserved pools;  
5           upon receiving a request for allocation of resources, determining a depth level  
6   from which to allocate resources; and  
7           allocating a reserved pool from the determined depth level.

1           26.    The system of claim 25, wherein the operations further comprise:  
2           generating control structures that indicate which resources are allocated to which  
3   processes.

1           27.    The system of claim 25, wherein the operations further comprise:  
2           when the allocation of the reserved pool is unsuccessful, attempting to allocate  
3   resources from an unreserved pool.

1           28.    The system of claim 27, wherein the operations further comprise:  
2           when the allocation from the unreserved pool is unsuccessful, placing the request  
3   in a data structure to wait for a reserved pool.

1           29.    The system of claim 25, wherein the operations further comprise:  
2           determining that a reserved pool at the determined depth level has been allocated;  
3   and

4 allocating a resource from the allocated reserved pool.

1 30. The system of claim 25, wherein when the request is a remote request, the  
2 determined depth level is a next depth level and when the request is a local request, the  
3 determined depth level is a current depth level.